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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/767,291

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Michael J. Sinclair

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LEE & HAYES PLLC
421 W RIVERSIDE AVENUE SUITE 500
SPOKANE, WA 99201

EXAMINER

HOLTON, STEVEN E

ART UNIT

PAPER NUMBER

2629

NOTIFICATION DATE

DELIVERY MODE

07/03/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

lhptoms@leehayes.com

Office Action Summary

Application No.

10/767,291

Applicant(s)

SINCLAIR, MICHAEL J.

Examiner

Steven E. Holton

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "lighting device" of claims 7 and 18 and the "device to change a direction of a beam directed onto the device" of claims 8 and 19 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "a device to change a direction of a beam directed onto the device" is not distinct and indefinite. In the case of the overlay, any button or structure on the device would cause light to bend or change some direction as it passes through the overlay medium. Also, it is unclear what type of beam is being redirected. It could be considered a beam of light or a physical beam. The Examiner assumes this device to change the direction of a beam is meant to discuss the redirector discussed in the specification, the details of the specification cannot be read into the claim language. This means that any structure on the overlay that changes the direction of the light beam reads on the claim as written.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 5, 8, 9, 12-14, 16, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Selig et al. (USPN: 6492978), hereinafter Selig.

Regarding claim 1, Selig discloses an apparatus including “a membrane (Fig. 3, element 24); a button structure disposed on the surface of the membrane (Fig. 2, elements 24a); and a nib corresponding to the button structure and disposed on another surface of the membrane (Fig. 4, element 24d), wherein the apparatus is configured to be operatively coupled to a touch screen display (Fig. 3, elements 16 and 18) so that when a user applies a force to the button structure the nib contacts the touchscreen display so as to activate a virtual button being displayed by the touchscreen display (col. 5, lines 24-36 and col. 6, lines 41-58).”

Regarding claim 2, Selig discloses the membrane being made of flexible and resilient material (col. 4, lines 43-50).

Regarding claim 3, Selig discloses the button structure comprising transparent and translucent portions (col. 6, lines 41-58).

Regarding claim 5, Selig discloses the device providing tactile feedback (col. 4, lines 15-24).

Regarding claim 8, Selig disclose a device to change the direction of a beam directed onto the device (col. 6, lines 41-58). The Examiner notes that the printed text on the keypad overlay would change the direction of light shining onto the button to be reflected back to the viewer.

Regarding claim 9, Selig discloses providing a recess for positioning the membrane near the display (col. 6, lines 11-31).

Regarding claim 12, Selig discloses an input apparatus including "a membrane (Fig. 3, element 24); and tactile means (Fig. 2, elements 24a), coupled to the membrane, for selectively contacting a touchscreen display (Fig. 3, elements 16 and 18) at a desired location in response to a force exerted on the tactile means by a user (Fig. 4, element 24d; col. 5, lines 24-36)."

Regarding claim 13, Selig discloses the membrane being made of flexible and resilient material (col. 4, lines 43-50).

Regarding claim 14, Selig discloses the button structure comprising transparent and translucent portions (col. 6, lines 41-58).

Regarding claim 16, Selig discloses the device providing tactile feedback (col. 4, lines 15-24).

Regarding claim 19, Selig disclose a device to change the direction of a beam directed onto the device (col. 6, lines 41-58). The Examiner notes that the printed text on the keypad overlay would change the direction of light shining onto the button to be reflected back to the viewer.

Regarding claim 20, Selig discloses providing a recess for positioning the membrane near the display (col. 6, lines 11-31).

4. Claim 1-3, 5, 6, 8, 10, 12-14, 16, 17, 19, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kraus et al. (USPN: 6776546), hereinafter Kraus

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Kraus discloses an input apparatus including "a membrane (Fig. 3a, element 110); a button structure on one surface of the membrane (Fig. 3a, elements 300); and a nib corresponding to the button structure and disposed on another side of the membrane (Fig. 3b, element 306), wherein the apparatus is configured to be operatively coupled to a touchscreen display so that when a user applies a force to the button structure the nib contacts the touchscreen display so as to activate a virtual button being displayed by the touchscreen display (Fig. 3c; col. 7, lines 15-42)."

Regarding claim 2, Kraus discloses making the membrane out of a flexible and resilient material (col. 7, lines 29-42).

Regarding claim 3, Kraus discloses making the overlay as being both opaque and transparent (translucent) (col. 2, lines 48-55).

Regarding claim 5, Kraus discloses providing haptic or tactile feedback to the user (col. 2, lines 32- 47).

Regarding claim 6, Kraus discloses providing a QWERTY keyboard layout (Fig. 3a, elements 300).

Regarding claim 8, Kraus discloses a device to change a direction of a beam directed onto the device (col. 2, lines 48-55). If the device is opaque light beams directed onto the device will be reflected back to a viewer.

Regarding claim 10, Kraus discloses sliding the overlay into a slot to place the overlay into position to be used with the touchscreen (col. 8, lines 33-60).

Regarding claim 12, Kraus discloses an input apparatus including "a membrane (Fig. 3a, element 110); and tactile means, coupled to the membrane (Fig. 3a, elements 300), for selectively contacting a touchscreen display at a desired location in response to a force exerted on the tactile means by a user (Fig. 3c; col. 7, lines 15-42)."

Regarding claim 13, Kraus discloses making the membrane out of a flexible and resilient material (col. 7, lines 29-42).

Regarding claim 14, Kraus discloses making the overlay as being both opaque and transparent (translucent) (col. 2, lines 48-55).

Regarding claim 16, Kraus discloses providing haptic or tactile feedback to the user (col. 2, lines 32- 47).

Regarding claim 17, Kraus discloses providing a QWERTY keyboard layout (Fig. 3a, elements 300).

Regarding claim 19, Kraus discloses a device to change a direction of a beam directed onto the device (col. 2, lines 48-55). If the device is opaque light beams directed onto the device will be reflected back to a viewer.

Regarding claim 21, Kraus discloses sliding the overlay into a slot to place the overlay into position to be used with the touchscreen (col. 8, lines 33-60).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4,7, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selig in view of Hanson et al. (USPN: 7079119), hereinafter Hanson.

Regarding claims 4 and 15, as discussed above, Selig discloses all of the limitations except, and “wherein the membrane comprises a fiber optic plate.”

Hanson discloses an overlay cover for a touchscreen. The overlay can be formed out of a light guide which is a directional light pipe or fiber optic plate (Fig. 5, element 56; col. 6, line 46 – col. 7, line 4).

At the time of invention it would have been obvious to one skilled in the art to modify the teachings of Selig with Hanson to produce a key overlay for a touchscreen that included a light guide. The motivation for doing so would be to provide illumination of the display beneath the key cover for easier viewing and use (Hanson, col. 7, lines 5-32). Thus, it would have been obvious for one skilled in the art to combine the teachings of Selig and Hanson to produce a key overlay for a touchscreen that included a fiber optic plate or other type of waveguide as described in claims 4 and 15.

Regarding claims 7 and 18, Hanson discloses providing lighting devices (Fig. 4, elements 54) to provide light to the membrane structure (col. 6, line 46 – col. 7, line 4).

6. Claims 11 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selig in view of Nasu (USPN: 7116313).

Regarding claims 11 and 22, Selig discloses all of the limitations except, “the button structure and nib are slidably fitted to a slot in the membrane.”

Nasu discloses a sliding input push button (Figs. 1 and 2, element 19) connected to a membrane (Figs. 1 and 2, element 12) and on top of a touch panel input device (Fig. 2, element 15).

At the time of invention it would have been obvious to one skilled in the art to combine the teachings of Selig and Nasu to produce a key overlay for a touchscreen and including a sliding input button. The sliding input button of Nasu could be combined with the key overlay of Selig to provide a further method of input such as for moving a pointer or other type of input on a touch panel (Nasu, col. 1, line 58 – col. 2, line 3).

Therefore, it would have been obvious to combine the teachings of Selig and Nasu to provide a key overlay for a touch panel that includes buttons and sliding buttons as disclosed in claims 11 and 22.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fischer et al. (USPN: 5821881) disclose a key overlay that slides onto a touch panel input device. Ukita et al. (USPgPub: 2003/0095110) discloses a tactile key overlay with buttons for use with a portable input device.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven E. Holton whose telephone number is (571) 272-7903. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven E. Holton
Division 2629
June 22, 2007

AMR A. AWAD
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read "Amir Ahmad Awad", is written over the printed name and title.